GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

Contents for Week of February 2, 1931. Vol. IX. No. 28

1. Glasgow: City of Steel and Ships, Prepares To Honor a Poet.
2. Aluminum: "Rookie" among Metals.
3. Do You Know Nagoya? A Million People Live There.
4. Italian Squadron Rolls Down to Rio by Air.
5. The Nashi, and China's "Wild and Woolly West."

© *National Geographic Society*

"AWAY, AWAY WITH SWORD AND DRUM!"

The Nashi priests' version of an old Navy chant, preliminary to driving out a "devil" from the Ngulukö house of Dr. Joseph Rock, during the National Geographic Society expedition to Yünnan Province, China (See Bulletin No. 5).

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Glasgow: City of Steel and Ships, Prepares To Honor a Poet

GLASGOW, giant city of steel and ships, is making plans to honor Sir Walter Scott on the 100th anniversary of his death next year.

Although he was born in Edinburgh, western Scotland was the scene of part of Sir Walter Scott's life and formed the rich background of "The Lady of the Lake," "Rob Roy," and other of his writings. The celebration is to be "a debt of gratitude for all his work in the interpretation of Scotland to the world, and in making Scotland for her sons and daughters a land of poetry and romance."

Runner-Up for London

Glasgow, center of the proposed celebration, is a city more famous for business romances than those of literature. Although more than 40 miles from the open sea, the city has, for many years, dominated the world's shipbuilding industry.

In spite of its off-the-sea location on the River Clyde, which, a century ago, a child could wade from shore to shore, Glasgow now rivals London and Liverpool for shipping, Newcastle and Cardiff for coal, and the Black Country (Birmingham) for iron.

Incidentally, Glasgow, although its name may not be quite so familiar as that of Liverpool, Edinburgh, Southampton, Oxford or Cambridge, is surpassed in size in Great Britain only by London. By extension of its boundaries in 1925 the Scottish metropolis was increased to 1,113,482 inhabitants. In the far-flung British Commonwealth of Nations, it is outranked by only two other cities—Calcutta and Bombay, although Sydney, Australia, has been climbing steadily in recent years and has passed the million mark.

Glasgow Made the Sea Come to Its Docks

How Glasgow, relatively a small community on a shallow stream, daring and more successful than Mahomet with his mountain, made the sea come to it, is one of the most fascinating romances of engineering. For a long time freight for the city was brought in ships to a point 40 miles down on the Clyde estuary and carried the rest of the way on pack horses and in carts. Later a port was established 19 miles away; but as the city grew the need for a port at its door became apparent. The situation seemed hopeless, but in 1773 engineers hit upon the scheme of narrowing the channel and making it dig its bottom deeper.

The plan worked. The pitifully meager 2-foot depth of those days had become 8 feet by 1836, 22 feet by 1900, and is now 26 feet—sufficient to accommodate huge modern ocean liners. Picks, wielded by wading men started the loosening of the river bottom in the old days; then came horse-drawn harrows. In late years explosives and modern steam dredges have helped keep the channel to its depth.

Except where there are commercial quays and docks, practically every foot of the Clyde waterfront from Glasgow to the estuary is now taken up with the world's greatest and busiest shipyards. Here in a stream, which, for depth at least, was once outranked by almost any second-rate American creek, were launched in recent years the giant *Aquitania*, the British battleship *Hood*, and other famous craft.

Glasgow's fame has gone farthest, perhaps, because of the somewhat unusual municipal enterprises it has conducted for its inhabitants.

The city took over its water works at an early date and developed them. It has operated its own gas works since 1869 and even rents cook stoves to householders for a small fee. Since 1892 the city has not only lighted its streets from

© *Photograph by Leslie G. Saunders*

A BAD PLACE FOR SEAPLANE MOTORS TO STOP

This section of the stern and rockbound coast of Brazil was traversed by the Italian transatlantic seaplane squadron in its flight from Natal to Rio de Janeiro. The Italian squadron followed the trail of the National Geographic Society's aerial survey party, which explored sky lanes from Washington to Buenos Aires (via Natal and Rio) last summer (See Bulletin No. 4).

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Aluminum: "Rookie" among Metals

ALUMINUM is a "rookie" among widely used commercial metals, but it is invading the field of substances that were in use before the birth of Christ.

In its early days, aluminum was so scarce and expensive that it was called "silver of clay." To-day the United States, the largest producer of the metal, refines more than 200,000,000 pounds annually.

Chinaware One-Fourth Aluminum

To the housewife the word, aluminum, probably means shiny pots and pans, but even in her home there may be other aluminum articles. Perhaps aluminum shingles or corrugated strips of aluminum cover the roof; aluminum weather strips secured by aluminum nails or screws make the windows and doors weather tight; the china on which she serves her dinners is made of kaolin which is about one-fourth aluminum.

The electric washer, floor polisher and vacuum cleaner have aluminum parts; aluminum fittings form a part of the electric lighting system. "Dad's" razor contains some aluminum, his smoking pipe stem has an aluminum sanitary device, and mother's cold cream jar top is aluminum.

You may think you have dodged aluminum, but aluminum salts or aluminum manufactures are always within man's eyeshot. One-twelfth of the earth's crust is aluminum and since the metal, in its native state, is found in nearly all clays and shales, aluminum is, no doubt, present in your own front yard, and those of your neighbors, whether you live in China or Iceland.

An Aluminum Vacation

In the city, aluminum cables carry electric current underground and overhead. A passing trolley car may have an aluminum body. Builders use large supplies of the metal because it will not rust or corrode and may be fashioned into decorative spandrels, cornices, gratings, window sills and even steeples. Fifty to 100 tons of the metal are used in a single modern office building.

Plan your 1931 vacation and it will, no doubt, be amid an array of aluminum products. If you travel by train, the railway coach and many of its fixtures may be aluminum. Perhaps the engine cab, headlights, steam tubes and wires are aluminum.

Family Automobile an Aluminum "Mine"

If you take a water trip, aluminum will be a constant companion. Aluminum hulls are manufactured for small craft. Ocean liners often carry aluminum, or aluminum alloy, bulkheads and doors, hand rails, life boats and davits, ventilator cowls, light fittings, gratings and floor plates. Down in the engine room, engineers keep the machinery lubricated with aluminum grease guns and oil containers.

The family car, too, is apt to be a mine of aluminum parts. It may have an aluminum body. Look under the hood and you may discover an aluminum alloy engine running on gasoline from an aluminum tank, which is connected with the engine by aluminum tubing. Under the floor boards you may discover aluminum terminals on the battery.

Popular in Aviation

Lightness in weight has made aluminum a favored metal among manufacturers of aviation supplies. A cubic foot of aluminum is one-third the weight of a cubic

municipally operated electric generating stations but has also furnished current for industry and for lighting dwellings. The street railways have been owned since 1872 and operated since 1894 by the city. The municipality constructed a subway when only London and Budapest had them, and operated it successfully by cable when London's steam "tube" was a failure.

Although Glasgow's Cathedral is smaller than any of the great English cathedrals, it is praised in Scott's "Rob Roy," as "a brave kirk—nane o' yere whigmaleeries and curliewurlies and opensteek hems about it—a' solid weel-joined masonwork, that will stand as long as the warld—keep hands and gunpowther aff it."

This, incidentally, is a fair sample of Glasgow Scottish dialect, and must be read aloud to be appreciated.

Bulletin No. 1, February 2, 1931.

Note: Scotland, the land of kilts and bagpipes, is illustrated in the *National Geographic Magazine*, "Scenes in Scotland," November, 1917. See also "The Orkneys and Shetlands, a Mysterious Group of Islands," February, 1921.

© *Photograph by Charles Reid*

"FULLBACK" ON A SCOTCH FARM

A son of Wallace takes three bonnie lassies for a tour of his Highland estate. This pastoral scene is far removed from the bustling industry of Scotland's great city of steel and ships, Glasgow. Yet much of the most beautiful scenery of Scotland, immortalized by Sir Walter Scott in his "Lady of the Lake," lies but a few miles north of Glasgow.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Do You Know Nagoya? A Million People Live There

WHEN a city reaches the million population class its name should be well known throughout the world. But Nagoya, Japanese industrial metropolis, is seldom heard of outside the Kingdom of the Rising Sun, where it is an enormous producer of Japanese dolls, ladies' fans, paper lanterns and porcelain dishes.

Japanese census takers have just announced figures which place Nagoya third among Nippon's three cities in the select million group. Only Osaka and Tokyo exceed it in population. Excluding the United States, Japan is the only nation having a regular census which can boast three such cities.

Automobiles and Jinrikishas

Although Nagoya is situated in the heart of Japan, it is not the picturesque oriental place one might imagine. It is modern, although it has distinct Japanese aspects.

Automobiles, taxis, street cars and bicycles crowd its streets, but always in the background are jinrikishas, ox-carts, and hurrying men and women dressed in Japan's familiar kimonos and sandals. Often the women carry tiny, black-haired babies strapped to their backs. School children wear modern clothes, especially young girls, who appear in uniforms of middy blouses, blue skirts, black stockings and shoes, with their hair braided.

Tall, European-looking buildings rise from broad streets in contrast to tiny one-room native shops, which sprawl along the sidewalks. Skyscrapers are not of the American variety, however, for the most towering buildings are purely Japanese.

Castle of Skyscraper Height

Rising from a deep moat and wall-inclosed hill, as high as a fifteen-story building, is Nagoya's impregnable feudal castle, her ancient claim to fame. It was built for a great emperor at the expense of opposing nobles. Although never tested in war, its donjon tower has withstood repeated earthquakes for more than three hundred years. Huge golden dolphins with upturned tails sparkle and shine in the sun from the highest peaks of its bronze-gabled roof. From the top floor, Mount Fuji, nearly 100 miles away, may be seen on clear days.

In a commercial museum are preserved samples of every product which has helped to put Nagoya "on the map." Each sample has the wholesale price marked on it—Japan's method of keeping down profiteering!

Near-by is Seto, where porcelain and cloisonné are manufactured. So universal has this porcelain ware become that throughout Japan it is known as "Seto-ware." Many porcelain radio insulators, familiar in the United States, are made here.

Night Is Shopping Time

Nagoya's narrow side streets, shops and theaters teem with life at night. Everyone seems to do his shopping after dark. Streets are made as bright as day by an elaborate system of electric lights. The little shops display merchandise ranging from cheap American clothes to household trinkets and lacquer bowls and vases.

Native inns have strange comforts. There are no beds or chairs. Walls between rooms are made of paper and windows are paper screens. Guests remove

foot of structural steel. Some manufacturers make nearly every part of the airplane from aluminum or an aluminum alloy. Others utilize it in propellers, wing ribs, engine noses, engines, instrument holders and pilots' seats and shelves. Parts not aluminum frequently are painted with a coat of aluminum paint.

Bulletin No. 2, February 2, 1931.

Note: The modern dirigible, made possible by aluminum, and its major conquests of the air are described in "The First Airship Flight around the World," June, 1930; "Navigating the 'Norge' from Rome to the North Pole and Beyond," August, 1927; "Seeing America from the 'Shenandoah,'" January, 1925; "Man's Amazing Progress in Conquering the Air," July, 1924; "Helium, the New Balloon Gas," May, 1919, and other articles in the *National Geographic Magazine* which may be found by consulting the Cumulative Index to the *Geographic Magazine* in your school or public library.

© Photograph from Wide World

ALUMINUM HELPED MAKE DIRIGIBLES POSSIBLE

Without duraluminum, an alloy of aluminum and copper, the world-circling flight of an airship with a "pay load" such as that of the *Graf Zeppelin* (see above) would not have been possible. A girder of duraluminum 16 feet long, and light enough to be balanced on one's little finger, will bear the load of eight men sitting on it. The *Graf Zeppelin* is shown circling Tokyo, Japan's capital (See also Bulletin No. 3).

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

Italian Squadron Rolls Down to Rio by Air

THE Italian seaplane squadron, in rolling by air down the Brazil coast from Natal to Rio, followed the track of the National Geographic Society aerial survey party, which explored the sky lanes from Washington to Buenos Aires last summer.

Frederick Simpich, National Geographic Society correspondent with the survey party, describes the section of the coast between Victoria, in the Brazilian State of Espirito Santo, and Rio de Janeiro, the glittering capital of Brazil.

"We made motion pictures of our own shadow on the clouds below, as we climbed over Victoria and flew south for Rio," he says. "For you can now go 'Rolling Down to Rio' on big ferry boats of the sky, giant seaplanes that ply regularly between the two Americas.

Cane-Loaded Oxcarts Below

"Skimming low to see the country, we came to the vast plantations on the rich, green plains about Campos. Horses and cattle by thousands grazed there; many herds stampeded when we roared a few yards above them. Peons, cutting sugar cane and loading it on big oxcarts, waved their machetes at us. Over muddy roads plodding ox teams hauled the heavy cane carts to the smoking sugar mill, or 'central,' as it is known to all the world's cane workers. Field overseers in white suits sat about on sleek saddle horses.

"On our whole flight from Washington, no stretch of scenery has been more graphic and absorbing. It was like a 100-mile panel or mural of 'Country Life in Brazil,' with farm folk gardening, feeding pigs, chopping wood, milking, or loafing. Children were at play, one group with a goat harnessed to a little wagon; at every farmhouse chickens ran for cover, thinking us a big hawk.

"Then it rained. Water fell all about us. It shut out a world-famed view we had waited for—the flock of odd, queer-shaped mountain rocks about Rio. These are a curiosity. They look almost artificial, as though on the earth, yet not of it. You fancy that some big David on another planet used his sling to hurl these boulders through space at our world, with Rio as his bull's-eye.

"When a hole of light showed ahead, Pilot Hawkins gave the big plane 'all the motors had,' and we fairly raced for that cloud break. And there was Rio, overcast, but visible, with its famous mountain, The Finger of God, reaching up and poking into low clouds.

A City of Many Parts

"From the air you see Rio, not as one big city unit like Chicago; a big city, yes—with more than 1,500,000, but broken into kaleidoscopic parts that are tucked into valleys, set on points of land, spread in the graceful bends of beautiful blue bays, or clinging like Tibetan monasteries to steep, wooded hills.

"And boldly, split straight through the heart of the immense, opulent city, runs the famous Avenida Rio Branco. It is Rio's main artery now. Few other cities on earth would have the municipal courage to let engineers do what Rio let them do. 'You need a long, fine wide avenue right through your crowded city,' the planners said. Rio answered 'O. K.' and they tore down hundreds of buildings, and now here is Rio Branco, a new Fifth Avenue, a Champs Élysées.

"Still feeling its growing pains, you see workmen dynamiting rocky hills away

their shoes or sandals before entering. They sleep on mats and when eating kneel on silk cushions before lacquer tables. Neat waitresses bring food and chopsticks to the room. Rice in beautiful porcelain bowls, and such delicacies as baby octopus, seaweed and sliced raw fish are popular. Milk, however, is always served from sterilized bottles.

Bulletin No. 3, February 2, 1931.

Note: Students desiring additional material on Japan should consult "Sakurajima, Japan's Greatest Volcanic Eruption," April, 1924; "How the Earth Telegraphed Its Tokyo Quake to Washington," October, 1923; "Some Aspects of Rural Japan," September, 1922; "The Geography of Japan," July, 1921, and other articles in the *National Geographic Magazine*.

© *National Geographic Society*

MADAME BUTTERFLY BECOMES A "HELLO GIRL"

In recent years the high cost of living has forced thousands of Japanese girls from their homes into industry. Now more than 12,000,000 women are employed in the telephone service and in the government postal and railway offices. Japanese women have played an important part in Nippon's rise as a great world industrial power.

GEOGRAPHIC NEWS BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)

General Headquarters, Washington, D. C.

The Nashi, and China's "Wild and Woolly West"

THE story of a world haunted by fearsome demons—the souls of the vengeful dead—is described in the six hundred volumes of Nashi pictograph literature which have recently been acquired by the Library of Congress.

Dr. Joseph Rock, National Geographic Society explorer, presented these priceless examples of Nashi writing, consisting of about a third of the world's most primitive living literature, to the Library as a memento of his expedition to China's "wild and woolly west," the Tibet border provinces. These curious volumes are of value not only because of their own literary merit but also because of the light they may throw on the evolution of written language for the expression of ideas.

Nashi Is a Land of Ups and Downs

The land of the Nashi people, in the Chinese province of Yünnan, from which these ancient writings came, is a region of deep canyons, and hoary ranges reaching heights of 20,000 feet or more above the sea. The aboriginal tribesmen of this western gateway of China into Tibet live in primitive villages perched on steep hillsides or snuggled in the great river trenches. Their life, particularly for those who must travel from village to village, is truly one of "ups and downs."

Far removed from the influence of northern and eastern Chinese civilizations the Nashi have come into contact only with tribes inferior to themselves, with the possible exception of the Tibetans.

Purely an agricultural people, the Nashi eke out a precarious existence. They are first definitely mentioned in the annals of the Tang dynasty about 796 A. D., but vague reference is made in the Chinese books of the sixteenth century before our era to a tribe which appeared on the western border of China, called Nung, Jung, or Njung. The Tibetans call the Nashi the Djong, or Djung, to this day, meaning rough, rude, impolite, which probably is a survival of the general name, also represented in the name Nu or Nung of the Lutzu, who inhabit a small strip of Salwin gorge immediately below the Tibetan border.

Believe Evil Spirits Cause Disease

At Ngulukö, a charmingly situated, if not overclean Nashi village on the slopes of the mighty Likiang snow range, with Mount Satseto as a patron guardian, the National Geographic Society's Yünnan Province Expedition had its headquarters. During two years of personal contact with the Nashi, the director won their confidence by treating their simple ailments, real and imaginary. For graver disorders they called in their priests, known as Tomba, who hold the belief that evil, unclean spirits select man or beast as their abode, and cause illness of the body. These "devils" they attempt to drive out by the beating of drums and symbols (see cover illustration).

"Nobody who does not live in Yünnan can conceive the utter chaos which exists here," Dr. Rock wrote to the National Geographic Society while in Nashi in 1924.

"Just before I left Yünnan a poor French priest was captured between this village (Ngulukö-Likiang) and Talifu. Now another, an old man, has been taken at Lang Kiung.

Even Magistrate Carried Off

"The robbers came to his house at 9 p. m. and marched him off. He was just about retiring when nine men arrived. After a march of 1½ miles he found 300

to make building lots or extend boulevards, or washing away giant clay banks with hydraulic streams, as in Seattle boom days.

"Scenically, architecturally, Rio startles you with its theatrical aspects. From my hotel window the sky line looks like a string of fantastic palaces at some world fair. And the long waterfront is unique. No dirty docks, smelly warehouses, ram-shackle wharf cafes and sailors' boarding houses. Instead, you ride from the dignified American Embassy at one end of a glittering bay-front boulevard around to a race-course at the other, with club buildings graceful as ancient temples in Egypt.

Street Cars Like Fireflies

"Like a colossal firefly a lighted aerial tram car crawls up its cable, carrying sightseers to view glittering Rio at night, from the peak of Sugar Loaf Mountain. High up along the top of an old Roman-like aqueduct, which brought water to the city in Portuguese days, a street-car line now rumbles, and hordes of democratic Brazilians ride the street cars for the sheer pleasure of seeing their home town. Highways, smooth and hard, wind into surrounding hills, to give breath-taking views of the far-flung city and its majestic island-studded bay.

"Paris, New York, San Francisco, all blend here. Tree-shaded boulevard cafes; long files of Fifth Avenue-style busses and a ferry to Nichteroy across the bay, of the same kind that ferries you from Market Street over to Oakland. Aristocratic homes, as on old Nob Hill. Infinite coffee shops, for coffee is more popular here than spirits. And more French is spoken, around hotels, theaters and intellectual centers, than the average American hears in Paris.

"Above all, the Brazilian himself. A new race, in a way; at least a new racial mixture, descended from Indians and those who migrated here. More than half of Brazil's population, and practically all its city dwellers, are of this racial blend, and the moderns are proud to be called 'Brazilieros.' It is a social error to call them Portuguese. Football is their fetish. Before the buildings of big dailies crowds block traffic to read the football scores. Football is above politics, horse races, news from Europe—even above the coffee quotations!"

Bulletin No. 4, February 2, 1931.

Note: Up-to-date material on the country traversed by the Italian flyers is included in "Skypaths through Latin America," January, 1931, *National Geographic Magazine*. See also "By Seaplane to Six Continents," September, 1928, and "How Latin America Looks from the Air," October, 1927.

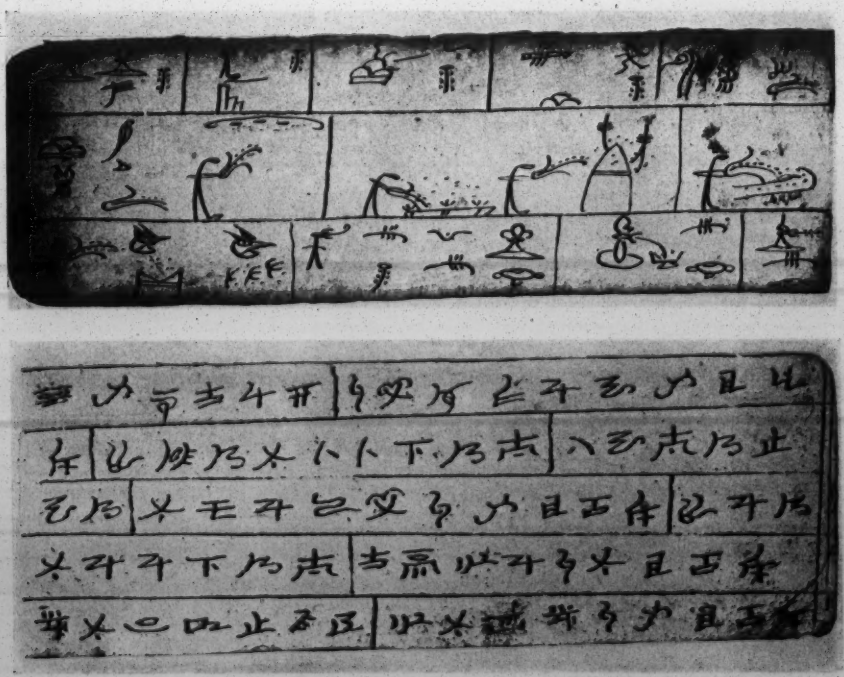
robbers awaiting him. The magistrate at Lang Kiung, who tried to do something toward his release, now has joined the French priest as prisoner. He also was carried off.

"There is no end to robbers. When moving out of this place anywhere one gets an escort of fifty to eighty soldiers, most of them ex-robbers. One is at a loss what to do, as they may turn brigands on the road, or, if one should meet active brigands, he fears his soldiers will join them.

"In the meantime the officials are beating the people, squeezing them to the last farthing. They smoke opium all night and get up at 2 or 3 p. m. It is like living in the gray of the Middle Ages."

Bulletin No. 5, February 2, 1931.

Note: Western China, a fascinating land largely unknown to white men, is described and illustrated in "The Glories of Minya Konka," October, 1930, *National Geographic Magazine;* "Life among the Lamas of Choni," and "Demon Dancers and Butter Gods of Choni," November, 1928; "Through the Great River Trenches of Asia," August, 1926; "The Land of the Yellow Lama," April, 1925; and "Banishing the Devil of Disease among the Nashi," November, 1924.



©National Geographic Society

PICTURE WRITING OF THE NASHI PRIESTS

The upper, a pictograph, relates the story of a flood. The lower form is a combination of Chinese and idea-suggesting characters. Hundreds of examples of this rare type of ancient literature have been added to the files of the Library of Congress in Washington. Study of them may reveal unknown chapters of the history of writing.